

IN THE CIRCUIT COURT OF MARSHALL COUNTY, WEST VIRGINIA

SCOTT G. MANDIROLA, Director,
Division of Water and Waste Management,
West Virginia Department of
Environmental Protection,

Plaintiff,

Civil Action No.: **09-C-98H**

PPG INDUSTRIES, INC.,

Defendant.

FIRST AMENDMENT TO CONSENT ORDER

Upon agreement to the terms herein by the parties, Scott Mandirola, Director of the Division of Water and Waste Management (the "Director") of the West Virginia Department of Environmental Protection ("WVDEP") and PPG Industries, Inc. ("PPG"), the parties agree that it is their intent to resolve certain violations of the West Virginia Water Pollution Control Act, West Virginia Code §§ 22-11-1 *et seq.*, as more fully set forth below, through this First Amendment to Consent Order. After consideration of public comments on this First Amendment to Consent Order, as proposed, and the parties' responses thereto, the Court enters this First Amendment to Consent Order.

Jurisdiction and Venue

A. This Court has jurisdiction over the subject matter and the parties hereto pursuant to W. Va. Code § 22-11-22. Venue is proper in this Circuit Court pursuant to W. Va. Code § 22-

11-22 because PPG is located and doing business in this judicial circuit and because the violations of the West Virginia Water Pollution Control Act ("WPCA") W. Va. Code §§ 22-11-1, *et seq.*, and the rules promulgated pursuant to the WPCA that are the subject of this action occurred in this judicial circuit.

Applicability

B. This First Amendment to Consent Order applies to and is binding upon WVDEP and to PPG and its successors, as the permittee of West Virginia National Pollutant Discharge Elimination System ("WV/NPDES") Permit No. WV0004359 (the "Permit").

Findings of Fact

C. The Director filed a Complaint in the Circuit Court of Marshall County, West Virginia, against PPG as set forth above in the caption of this First Amendment to Consent Order, alleging that PPG violated the WPCA through discharges of pollutants from its manufacturing facility in Natrium, Marshall County, West Virginia, (the "Natrium Plant") which are covered by the Permit.

D. After public notice and consideration of public comments on a proposed Consent Order, and the parties' responses thereto, the Court entered the Consent Order in this matter on August 18, 2010.

E. Among other things, the Consent Order required PPG to: (i) pay a total cash penalty of \$1,020,000 to the WVDEP; (ii) perform certain Supplemental Environmental Projects ("SEPs"); (iii) perform certain corrective actions; and (iv) pay stipulated penalties to WVDEP for violations of the terms or conditions of the Permit and failure to take or complete the

corrective actions.

F. PPG paid the total cash penalty of \$1,020,000 and performed the corrective actions. PPG also paid certain stipulated penalties in accordance with the applicable provisions of the Consent Order, which provisions expired on July 1, 2011. Per a request from WVDEP and without objection from PPG, PPG subsequently paid \$201,000 in stipulated penalties to WVDEP for violations of the Permit after July 1, 2011 "as though" the stipulated penalty provisions of the Consent Order were still in effect. WVDEP and PPG have since determined that these payments were not required by the Consent Order, but that they instead should be: (i) credited toward the civil penalty discussed in **Paragraph 1**, below; or (ii) returned to PPG in the event that this First Amendment to Consent Order is not entered by the Court as a final judgment and order. PPG continues to perform the SEPs as required by the Consent Order.

G. On July 31, 2011, additional "final" effluent limitations became effective in the Permit. These included effluent limits for BHC-Alpha, BHC-Beta, and BHC-Gamma at Outfalls 011 and 012. PPG has experienced difficulty ensuring consistent compliance with some of these additional final effluent limitations, and the corrective actions in the Consent Order do not directly address them.

H. PPG has reported the quality of its discharges and other information to WVDEP pursuant to the terms and conditions of the Permit. This reporting has occurred through submittal of monthly Discharge Monitoring Reports (hereinafter "DMRs") as prescribed by the Division of Water and Waste Management of the WVDEP.

I. WVDEP has evaluated the DMRs, agency records regarding the Permit, and other related information and has completed an evaluation of PPG's compliance record.

J. Set forth in **Attachment 1** is a listing of all violations of the Permit reported by PPG

from August 1, 2011 through December 31, 2012.

K. The parties have agreed that the civil penalties to be paid and the corrective measures to be performed pursuant hereto satisfy all known claims that may be asserted for civil penalties under the WPCA for the discharge of any pollutant regulated by the Permit from November 1, 2009 through the entry date of this First Amendment to Consent Order.

L. On or about January 28, 2013, PPG transferred the Natrium Plant to Eagle Natrium, LLC ("Eagle Natrium"). Upon such transfer and transfer of the Permit, Eagle Natrium became the permittee of the Permit, and a successor to PPG under the Consent Order and this First Amendment to Consent Order.

M. PPG has undertaken significant steps towards ensuring consistent, long-term compliance with the final effluent limitations for BHC-Alpha, BHC-Beta, and BHC-Gamma at Outfalls 011 and 012.

N. BHC-Alpha, BHC-Beta, and BHC-Gamma are organochlorides previously used in manufacturing operations at the Natrium Plant. BHC has not been manufactured at the Natrium Plant since 1961, but areas of the Natrium Plant's groundwater are impacted with BHC. It is believed that the groundwater is infiltrating the sewer lines and is being discharged from Outfalls 011 and 012, causing exceedances of the final limitations.

O. PPG conducted an in-situ pilot treatment study during 2009 to determine the effectiveness of injecting persulfate into the groundwater for treatment of BHC at an approximate cost of \$213,000. Based on sampling, it was determined that the in-situ treatment would not achieve effluent compliance at Outfall 012. During the spring of 2010, based on the results of the in-situ groundwater treatment, PPG decided to construct a groundwater treatment system to treat well water from 3 primary water wells. This work was completed during early

July of 2011. An additional pilot treatment study demonstrated that carbon treatment is effective in removing BHC from the groundwater. PPG subsequently installed a \$378,000 carbon treatment system for well water treatment at the Natrium Plant. This carbon treatment system became operational in July of 2011, and it treats groundwater prior to discharge at Outfall 012, reducing the loading of BHC-Alpha, BHC-Beta, and BHC-Gamma in the Outfall 012 effluent. Sampling is routinely performed at the carbon treatment system to monitor the effectiveness of BHC removal and results have typically shown non-detects in the discharge from the carbon treatment system.

P. In April of 2012, PPG cleaned and lined sections of the Outfall 012 underground sewer system at an additional cost of \$547,000. These steps further reduced the loading of BHC-Alpha, BHC-Beta, and BHC-Gamma in the Outfall 012 effluent.

Q. In August of 2012, PPG redesigned and reconfigured the Outfall 012 structure to further improve the effluent quality, which was performed at an additional cost of \$313,000.

R. In December of 2012, PPG engaged the national consulting firm CH2M Hill to further evaluate the issues, review all work performed to date, and develop recommendations for reducing the loading of BHC-Alpha, BHC-Beta, and BHC-Gamma in the Outfall 011 and Outfall 012 effluents in order to achieve compliance with the final effluent limitations.

S. PPG is continuing to implement its 5-Year Mercury Reduction Plan, as approved by the Ohio River Valley Water Sanitation Commission and as set forth in **Attachment 2**, further addressing some of the compliance issues outlined in the Consent Order.

ORDER

NOW, THEREFORE, in accordance with Chapter 22, Article 11, Section 1 *et seq.* of the West Virginia Code, it is hereby AGREED between the parties and ORDERED by the Court as follows:

Civil Penalty

1. In settlement of WVDEP's claims up to and through the date of this First Amendment to Consent Order relating to reported violations of the WPCA and Permit and for relief under W. Va. Code § 22-11-22, PPG, without admitting liability for any alleged violations or agreeing to the appropriateness of the civil penalty expressed herein except in the context of this First Amendment to Consent Order, agrees for purposes of the settlement provided herein that it shall pay a total civil penalty of Four Hundred Forty-Nine Thousand, Nine Hundred Sixty-Eight Dollars, and No Cents (\$449,968.00). The \$201,000 already paid as discussed in **Paragraph F**, above, shall be credited toward this payment, leaving a balance to be paid of \$248,968.

2. Payment of the balance of \$248,968 shall be by certified or cashier's check to WVDEP for deposit in WVDEP's Water Quality Management Fund, and shall be due to WVDEP within thirty (30) days of entry of this First Amendment to Consent Order by the Court.

3. The payment shall be mailed to the following address:

Michael Zeto, Chief Inspector
West Virginia Department of Environmental Protection
Environmental Enforcement
601 57th Street SE
Charleston, WV 25304

Stipulated Penalties

4. In the event PPG violates any term or condition of its Permit, PPG shall be obligated to pay the following stipulated penalties to WVDEP:

- a. For the violation of a daily maximum limit PPG shall pay \$1,000 per violation.
- b. For the violation of a monthly average limit PPG shall pay
 - i. \$3,000 per violation if the concentration is less than 300% of the Permit limit; and
 - ii. \$6,000 per violation if the concentration is equal to or greater than 300% of the Permit limit.

5. For failure to take or complete any step outlined in the corrective action plan set forth in **Paragraphs 9 - 14** herein, PPG shall be obligated to pay the following stipulated penalties to WVDEP:

- a. For the 1st through 15th day of noncompliance, PPG shall pay \$500 per day per violation;
- b. For the 16th through 30th day of noncompliance, PPG shall pay \$750 per day per violation; and
- c. For any period of noncompliance after the 30th day, PPG shall pay \$1,000 per day per violation.

6. Stipulated penalties shall be payable within thirty (30) days of receipt of a written demand from the WVDEP. Such payments shall be made by certified or cashier's check payable to the West Virginia Department of Environmental Protection and delivered to the address specified in **Paragraph 3** for deposit in the Water Quality Management Fund.

7. The stipulated penalties provided herein are an enforcement action pertaining only to the requirements of this First Amendment to Consent Order and are in addition to other remedies and sanctions available to the WVDEP by reason of PPG's failure to comply with the requirements of the First Amendment to Consent Order, the WPCA, and/or its Permit. Any other provision of the Permit not described or set forth in this First Amendment to Consent Order or its attachments shall be sanctioned as provided by the WPCA or the regulations governing NPDES permits.

8. The schedule of stipulated penalties provided herein is effective from January 1, 2013 through June 30, 2016.

Corrective Action Plan

9. As discussed in **Paragraph R**, above, PPG shall continue to develop a plan to ensure consistent, long-term compliance with final effluent limitations for BHC-Alpha, BHC-Beta, and BHC-Gamma at Outfalls 011 and 012 (the "BHC Compliance Plan"). PPG shall submit the BHC Compliance Plan to WVDEP no later than December 31, 2013, at which time it will be incorporated herein as an obligation of this First Amendment to Consent Order.

10. PPG shall submit complete and accurate applications for any and all permits required to implement the BHC Compliance Plan as soon as reasonably possible, but in no event later than December 31, 2013.

11. PPG shall commence implementation of the BHC Compliance Plan as soon as reasonably possible, but in no event later than June 1, 2014. Provided, however, that prior to June 1, 2014, PPG shall continue to implement compliance activities as reasonably possible which do not require permit modification or issuance, or other governmental approvals.

12. PPG shall achieve final compliance with the final effluent limitations for BHC-Alpha, BHC-Beta, and BHC-Gamma at Outfalls 011 and 012 as soon as reasonably possible, but in no event later than December 31, 2015.

13. The parties acknowledge that significant study, evaluation, engineering, and possible construction will be required to develop the BHC Compliance Plan, and that as such it may be appropriate to expedite or extend the December 31, 2015 final compliance date set forth in **Paragraph 12** after additional information is developed. In such event, the parties agree to discuss reasonable alternative final compliance dates. Such final compliance date therefore may be expedited or extended upon written agreement of the parties, which written agreement shall be submitted to the Court for its information. Upon submission to the Court, the expedited or extended final compliance date shall replace the December 31, 2015 final compliance date set forth in **Paragraph 12** and it will be incorporated herein as an obligation of this First Amendment to Consent Order.

14. PPG shall include information regarding its compliance with the corrective action plan set forth in **Paragraphs 9 - 13** herein in the quarterly compliance reports required by **Article VIII** of the Consent Order.

Force Majeure

15. If any event occurs that causes or may cause a violation of any provision of this First Amendment to Consent Order by PPG, PPG shall notify the WVDEP in writing within ten (10) days of the date on which it had knowledge or should have had knowledge that the event may or will cause a violation. Writing may include the use of electronic mail at an e-mail address provided for the Chief Inspector of the Division of Water and Waste Management. The notice

shall describe the anticipated duration of the violation, the precise cause or causes of the violation, the measures taken and/or to be taken by PPG to minimize the violation, and the timetable by which those measures will be implemented. PPG will adopt all measures to avoid or minimize any such violation. PPG shall make all efforts to identify events that cause or may cause a violation of this First Amendment to Consent Order.

16. If the WVDEP agrees that any violation of this First Amendment to Consent Order is caused by circumstances reasonably beyond the control of PPG, PPG shall be excused as to that violation for the period of time the violation continues due to such circumstances. PPG's time for performance shall be extended for a period not exceeding the delay actually resulting from such circumstances. In the event the WVDEP does not agree, then PPG may submit the matter to this Court for resolution. The burden of proving that any delay was caused by circumstances reasonably beyond the control of PPG and the length of such delay shall rest with PPG. Failure by PPG to comply with the notice requirements in **Paragraph 15** shall render these Force Majeure provisions void and of no force and effect as to the particular incident involved and shall constitute a waiver of PPG's rights under these provisions to obtain an extension of its obligations based on that incident.

17. Compliance with any requirement of this First Amendment to Consent Order, by itself, shall not constitute compliance with any other requirement. PPG must make an individual showing of proof regarding each delayed incremental step or other requirement for which an extension is sought.

Dispute Resolution

18. The Court shall retain jurisdiction over this matter for the purpose of interpreting and enforcing the terms of this First Amendment to Consent Order until the Order is terminated as set forth below. Additionally, should either party believe that the other has failed or is failing to comply with the terms of this First Amendment to Consent Order, it may petition this Court for a resolution of the issue.

Modifications

19. Should any person seek to intervene in the proceeding before the Circuit Court of Marshall County and thereafter challenge this First Amendment to Consent Order upon entry as a final order and judgment, whether the challenge is in the form of any appeal to the Supreme Court of Appeals or a collateral challenge in the federal court of the Northern District of West Virginia, the parties agree that nothing herein prohibits PPG or its successor(s) from seeking relief from the appropriate tribunal to stay its obligations expressed herein until such time that any appeal or challenge is completed and not subject to further review. Provided, however, that PPG or its successor(s) shall not be entitled to a stay or other relief from liability for the civil penalties for which **Paragraphs 1 - 3** herein provide or the stipulated penalties for which **Paragraphs 4 - 8** herein provide.

Permits and Other Laws and Regulations

20. This First Amendment to Consent Order is not, and shall not be interpreted to be, a permit or modification of a permit under the WPCA, nor shall it relieve PPG of any other

obligation imposed by the WPCA, its Permit, or any permit issued under the WPCA, except as expressly provided herein, nor shall it in any way relieve PPG of its obligation to comply with any other federal or state law or any rule or regulation in any way related to the substance of this First Amendment to Consent Order. Any new permit or modification must be obtained in accordance with applicable federal and state laws.

Effect

21. Upon the transfers discussed in **Paragraph L**, above, both the Consent Order and this First Amendment to Consent Order became applicable to Eagle Natrium and Eagle Natrium shall be bound by them.

22. This First Amendment to Consent Order, together with the Consent Order, shall act as a bar, full accord, and satisfaction and have the effect of *res judicata* for any known claim or cause of action brought or that may have been brought, including those seeking injunctive relief, for reported violations during the period from April 1, 2006 through entry of this First Amendment to Consent Order pursuant to 33 U.S.C. § 1365(a)(1)(A).

23. The Consent Order shall remain in full force and effect and shall not be terminated in accordance with **Article XV**, thereof, until both the requirements of said **Article XV** have been satisfied and this First Amendment to Consent Order is terminated in accordance with **Paragraph 26**, below.

Public Notice

24. The parties acknowledge and agree that final approval of this First Amendment to Consent Order is subject to public notice and comment as provided in C.S.R. § 47-30-15.2.c. PPG shall be responsible for paying any and all fees or charges associated with the publication of a public notice regarding this First Amendment to Consent Order. The public shall have at least thirty (30) days in which to make any comments on this First Amendment to Consent Order and the WVDEP reserves the right to withhold or withdraw its consent or propose modifications to this First Amendment to Consent Order if warranted based on comments received during the period for public comments. If the WVDEP makes no changes in response to public comments, PPG consents to entry of this First Amendment to Consent Order without further notice. If for any reason this Court should decline to approve this First Amendment to Consent Order in the form presented, this agreement is voidable at the sole discretion of either party and the terms of the agreement may not be used as evidence in any litigation between the parties.

Effective Date

25. The effective date of this First Amendment to Consent Order shall be the date upon which it is entered by the Court as a final judgment and order.

Termination

26. Termination of this First Amendment to Consent Order shall be by Order of the Court upon application by either party, provided that all of the following conditions have been met: (1) PPG (or its successor) has achieved complete compliance with all requirements of this First Amendment to Consent Order; (2) PPG (or its successor) has paid all civil and stipulated

penalties required herein; and (3) all motions and other proceedings concerning this First Amendment to Consent Order have been completed and are no longer subject to further judicial review and all relief resulting from such motions or other proceedings has been fully satisfied. As appropriate, the party(ies) may request the Court to terminate both the Consent Order and this First Amendment to Consent Order at the same time.

Signatories Authorized

27. Each of the signatories to this First Amendment to Consent Order certifies that she or he is fully authorized to enter into the terms and conditions of this First Amendment to Consent Order and to bind legally the party to the First Amendment to Consent Order so represented by her or him.

It is so ORDERED this ____ day of _____, 2013.

DAVID W. HUMMEL, JUDGE

We hereby consent to the entry of this Order:

Scott G. Mandirola, Division of Water and
Waste Management
West Virginia Department of Environmental Protection

Date

Joshua B. Collins (WV Bar No. 10257)
Office of Legal Services
West Virginia Department of Environmental Protection
601 57th Street SE
Charleston, WV 25304
(304) 926-0460

Date

PPG Industries, Inc.

Date

By:

Title:

Dean A. Calland
Donald C. Bluedorn II (WV Bar No. 7826)
Matt S. Casto (WV Bar No. 8174)
Babst, Calland, Clements & Zomnir, P.C.
United Center
500 Virginia Street East
Charleston, WV 25301
(681) 205-8888

Date

ATTACHMENT 1

Attachment 1

	Month	Outfall	Parameter	Limit	Units	Rep'td	Units	Type
1	Aug-11	012	BHC-Alpha	0.0026	ug/l	0.0049	ug/l	Ave
2	Aug-11	012	BHC-Beta	0.0091	ug/l	0.04	ug/l	Ave
3	Aug-11	012	BHC-Beta	0.013	ug/l	0.04	ug/l	Max
4	Sep-11	012	BHC-Alpha	0.0026	ug/l	0.01	ug/l	Ave
5	Sep-11	012	BHC-Alpha	0.0053	ug/l	0.01	ug/l	Max
6	Sep-11	012	BHC-Beta	0.0091	ug/l	0.03	ug/l	Ave
7	Sep-11	012	BHC-Beta	0.013	ug/l	0.03	ug/l	Max
8	Oct-11	009	Mercury	0.215	ug/l	0.225	ug/l	Max
9	Oct-11	012	BHC-Alpha	0.0026	ug/l	0.158	ug/l	Ave
10	Oct-11	012	BHC-Alpha	0.0053	ug/l	0.158	ug/l	Max
11	Oct-11	012	BHC-Beta	0.0091	ug/l	0.0626	ug/l	Ave
12	Oct-11	012	BHC-Beta	0.013	ug/l	0.0626	ug/l	Max
13	Nov-11	012	BHC-Alpha	0.0026	ug/l	0.15	ug/l	Ave
14	Nov-11	012	BHC-Alpha	0.0053	ug/l	0.15	ug/l	Max
15	Nov-11	012	BHC-Beta	0.0091	ug/l	0.06	ug/l	Ave
16	Nov-11	012	BHC-Beta	0.013	ug/l	0.06	ug/l	Max
17	Dec-11	005	Iron	1.5	mg/l	2	mg/l	Max
18	Dec-11	006	Iron	0.9965	mg/l	1.8	mg/l	Ave
19	Dec-11	007	Iron	1.068	mg/l	2.4	mg/l	Ave
20	Dec-11	009	TRC	0.061	mg/l	0.551	mg/l	Max
21	Dec-11	011	Iron	1.5	mg/l	5.7	mg/l	Max
22	Dec-11	011	Aluminum	5	mg/l	5.2	mg/l	Max
23	Dec-11	011	BHC-Alpha	0.0026	ug/l	0.0085	ug/l	Max
24	Dec-11	011	BHC-Beta	0.019	ug/l	0.05	ug/l	Max
25	Dec-11	012	BHC-Alpha	0.0026	ug/l	0.09	ug/l	Ave
26	Dec-11	012	BHC-Alpha	0.0053	ug/l	0.09	ug/l	Max
27	Dec-11	012	BHC-Beta	0.0091	ug/l	0.05	ug/l	Ave
28	Dec-11	012	BHC-Beta	0.013	ug/l	0.05	ug/l	Max
29	Dec-11	014	Iron	1.5	mg/l	4.2	mg/l	Max
30	Dec-11	021	Iron	1.5	mg/l	3.6	mg/l	Max
31	Dec-11	023	Iron	1.5	mg/l	14.1	mg/l	Max
32	Jan-12	012	BHC-Alpha	0.0026	ug/l	0.12	ug/l	Ave
33	Jan-12	012	BHC-Alpha	0.0053	ug/l	0.12	ug/l	Max
34	Jan-12	012	BHC-Beta	0.0091	ug/l	0.07	ug/l	Ave
35	Jan-12	012	BHC-Beta	0.013	ug/l	0.07	ug/l	Max
36	Feb-12	009	Iron	2.188	mg/l	4.3	mg/l	Max
37	Feb-12	012	BHC-Alpha	0.0026	ug/l	0.00933	ug/l	Ave
38	Feb-12	012	BHC-Alpha	0.0053	ug/l	0.00933	ug/l	Max
39	Feb-12	012	BHC-Beta	0.0091	ug/l	0.0238	ug/l	Ave
40	Feb-12	012	BHC-Beta	0.013	ug/l	0.0238	ug/l	Max

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41	Mar-12 004	Total Residual Chlorine	0.0247	mg/l	0.043	mg/l	Max
42	Mar-12 005	Iron	1.5	mg/l	1.7	mg/l	Max
43	Mar-12 007	Iron	1.068	mg/l	1.09	mg/l	Ave
44	Mar-12 011	BHC-Beta	0.019	ug/l	0.0298	ug/l	Max
45	Mar-12 012	Tetrachloroethylene	0.69	ug/l	1.35	ug/l	Ave
46	Mar-12 012	Tetrachloroethylene	1.01	ug/l	1.35	ug/l	Max
47	Mar-12 012	BHC-Beta	0.0091	ug/l	0.0859	ug/l	Ave
48	Mar-12 012	BHC-Beta	0.013	ug/l	0.0859	ug/l	Max
49	Mar-12 012	BHC-Alpha	0.0026	ug/l	0.0824	ug/l	Ave
50	Mar-12 012	BHC-Alpha	0.0053	ug/l	0.0824	ug/l	Max
51	Mar-12 015	Iron	1.5	mg/l	1.7	mg/l	Max
52	Apr-12 012	BHC-Alpha	0.0026	ug/l	0.03	ug/l	Ave
53	Apr-12 012	BHC-Alpha	0.0053	ug/l	0.03	ug/l	Max
54	May-12 004	Mercury	0.0196	ug/l	0.048	ug/l	Max
55	May-12 009	Iron	2.188	mg/l	2.5	mg/l	Max
56	May-12 012	Iron	0.924	mg/l	4.64	mg/l	Ave
57	May-12 012	Iron	2.721	mg/l	9.1	mg/l	Max
58	May-12 012	BHC-Alpha	0.0026	ug/l	0.04	ug/l	Ave
59	May-12 012	BHC-Alpha	0.0053	ug/l	0.04	ug/l	Max
60	May-12 012	BHC-Beta	0.0091	ug/l	0.02	ug/l	Ave
61	May-12 012	BHC-Beta	0.013	ug/l	0.02	ug/l	Max
62	Jun-12 012	BHC-Alpha	0.0026	ug/l	0.16	ug/l	Ave
63	Jun-12 012	BHC-Alpha	0.0053	ug/l	0.16	ug/l	Max
64	Jun-12 012	BHC-Beta	0.0091	ug/l	0.23	ug/l	Ave
65	Jun-12 012	BHC-Beta	0.013	ug/l	0.23	ug/l	Max
66	Jul-12 009	Tetrachloroethylene	0.69	ug/l	1.42	ug/l	Ave
67	Jul-12 009	Tetrachloroethylene	1.05	ug/l	1.42	ug/l	Max
68	Jul-12 012	BHC-Alpha	0.0026	ug/l	3.39	ug/l	Ave
69	Jul-12 012	BHC-Alpha	0.0053	ug/l	3.39	ug/l	Max
70	Jul-12 012	BHC-Beta	0.0091	ug/l	0.87	ug/l	Ave
71	Jul-12 012	BHC-Beta	0.013	ug/l	0.87	ug/l	Max
72	Jul-12 012	BHC-Gamma	0.019	ug/l	0.25	ug/l	Ave
73	Jul-12 012	BHC-Gamma	0.033	ug/l	0.25	ug/l	Max
74	Aug-12 009	Chloroform	5.7	ug/l	11	ug/l	Ave
75	Aug-12 009	Chloroform	8.3	ug/l	11	ug/l	Max
76	Sep-12 002	Iron	1.5	mg/l	1.8	mg/l	Max
77	Sep-12 005	Iron	1.5	mg/l	4.9	mg/l	Max
78	Sep-12 011	BHC-Alpha	0.0053	ug/l	0.00363	ug/l	Max
79	Sep-12 011	BHC-Beta	0.019	ug/l	0.07	ug/l	Max
80	Sep-12 012	BHC-Alpha	0.0026	ug/l	0.0049	ug/l	Ave
81	Sep-12 012	BHC-Beta	0.0091	ug/l	0.014	ug/l	Ave
82	Sep-12 012	BHC-Beta	0.013	ug/l	0.014	ug/l	Max
83	Sep-12 021	Iron	1.5	mg/l	9.7	mg/l	Max
84	Sep-12 022	Iron	1.5	mg/l	2.6	mg/l	Max

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85	Sep-12 023	Iron	1.5	mg/l	2.9	mg/l	Max
86	Oct-12 012	BHC-Beta	0.0091	ug/l	0.101	ug/l	Ave
87	Oct-12 012	BHC-Beta	0.013	ug/l	0.101	ug/l	Max
88	Oct-12 012	BHC-Alpha	0.0026	ug/l	0.238	ug/l	Ave
89	Oct-12 012	BHC-Alpha	0.0053	ug/l	0.238	ug/l	Max
90	Nov-12 009	Mercury	0.124	ug/l	0.1207	ug/l	Ave
91	Nov-12 009	Mercury	0.215	ug/l	0.1207	ug/l	Max
92	Dec-12 002	Iron	1.5	mg/l	23.0	mg/l	Max
93	Dec-12 005	Iron	1.5	mg/l	3.9	mg/l	Max
94	Dec-12 014	Iron	1.5	mg/l	1.7	mg/l	Max
95	Dec-12 015	Iron	1.5	mg/l	1.8	mg/l	Max
96	Dec-12 021	Iron	1.5	mg/l	1.7	mg/l	Max
97	Dec-12 022	Iron	1.5	mg/l	2.7	mg/l	Max
98	Dec-12 023	Iron	1.5	mg/l	1.8	mg/l	Max
99	Dec-12 012	BHC-Alpha	0.0026	ug/l	0.0089	ug/l	Ave
100	Dec-12 012	BHC-Alpha	0.0053	ug/l	0.0089	ug/l	Max
101	Dec-12 012	BHC-Beta	0.013	ug/l	0.014	ug/l	Max
102	Dec-12 012	BHC-Beta	0.0091	ug/l	0.014	ug/l	Ave
103	Dec-12 011	BHC-Beta	0.0091	ug/l	0.0291	ug/l	Max
104	Dec-12 009	Mercury	0.215	ug/l	0.2643	ug/l	Max

Ave Monthly average
Max Daily maximum

ATTACHMENT 2

5-Year Mercury Reduction Plan
As Approved by the Ohio River Valley Water Sanitation Commission

Projects
<u>2012</u>
Continue to evaluate the new well water mercury treatment system and identify areas for operational improvement and optimization to further reduce the mercury discharge concentrations. <ul style="list-style-type: none"> • Optimize sand filter performance
Redefine internal sewer sampling protocol based upon current mercury concentration.
Investigate installation of dewatering station to remove Hg contaminated solids and reduce loading at process water mercury treatment.
<u>2013</u>
Complete installation of dewatering station to remove Hg contaminated solids and reduce loading at process water mercury treatment.
Review and evaluate the mercury treatment system operational data collected during 2012 and identify methods for improvement and implement as necessary.
Investigate collection and treatment of non-captured storm water near 7 circuit building.
Continue to collect samples at the specific internal sampling locations to monitor mercury concentrations in the sewer. Ensure elevated mercury concentrations are investigated and appropriate corrective actions are implemented.
Investigate and evaluate new mercury treatment technologies as they become available for potential application at the Natrium facility.
<u>2014</u>
Review and evaluate the mercury treatment system operational data collected during 2013 and identify methods for improvement and implement as necessary.
Based on 2013 evaluation of storm water collection near 7 circuit, design and install system to collect contaminated storm water.

Continue to collect samples at the specific internal sampling locations to monitor mercury concentrations in the sewer. Ensure elevated mercury concentrations are investigated and appropriate corrective actions are implemented.
Inspect and clean sewer lines previously lined as needed. Clean accumulated sediment from sumps, manways, and catch basins in sewer system.
Investigate and evaluate new mercury treatment technologies as they become available for potential application at the Natrium facility.
<u>2015</u>
Continue to collect samples at the specific internal sampling locations to monitor mercury concentrations in the sewer. Ensure elevated mercury concentrations are investigated and appropriate corrective actions are implemented.
Collect samples to determine mercury content of sediment in sumps, manways, and catch basins in sewer system and clean as necessary.
Investigate and evaluate new mercury treatment technologies as they become available for potential application at the Natrium facility.
<u>2016</u>
Continue to collect samples at the specific internal sampling locations to monitor mercury concentrations in the sewer. Ensure elevated mercury concentrations are investigated and appropriate corrective actions are implemented.
Inspect and investigate impact of cleaning additional sewer lines and sumps
Collect samples to determine mercury content of sediment in sumps, manways, and catch basins in sewer system and clean as necessary.
Investigate and evaluate new mercury treatment technologies as they become available for potential application at the Natrium facility.
<u>2017-2019</u> PPG will continue to investigate opportunities to further reduce mercury concentrations via identification and elimination of historical sources and/or treatment.